

REMARKS-General

1. The newly drafted independent claims 22 and 28 incorporates all structural limitations of the original claims 1 and 13 and include further limitations previously brought forth in the disclosure. No new matter has been included. All new claims 22-40 are submitted to be of sufficient clarity and detail to enable a person of average skill in the art to make and use the instant invention, so as to be pursuant to 35 USC 112.

Response to Rejection of Claims 1-21 under 35USC103

2. The Examiner rejected claims 1-21 over Mohacsi (US 5,898,272) in view of Boffito et al (US 4,312,669) and Nigg (US 5,015,917). Pursuant to 35 U.S.C. 103:

“(a) A patent may not be obtained though the invention is **not identically** disclosed or described as set forth in **section 102 of this title**, if the **differences** between the subject matter sought to be patented and the prior art are such that the **subject matter as a whole would have been obvious** at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.”

3. In view of 35 U.S.C. 103(a), it is apparent that to be qualified as a prior art under 35USC103(a), the prior art must be cited under 35USC102(a)~(g) but the disclosure of the prior art and the invention are not identical and there are one or more differences between the subject matter sought to be patented and the prior art. In addition, such differences between the subject matter sought to be patented **as a whole** and the prior art are obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

4. In other words, the differences between the subject matter sought to be patent as a whole of the instant invention and Mohacsi which is qualified as prior art of the instant invention under 35USC102(b) are obvious in view of Boffito and Nigg at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

5. The applicant respectfully submits that in order to determine whether the differences between the subject matters sought to be patent as a whole of the instant

invention and the primary prior art, Mohacsi, are obvious in view of the supplemental cited arts, Boffito and Nigg, we have to identify all the differences between the claims of the instant inventions and Mohacsi. The applicant respectfully identifies the differences between the claims of the instant invention and Mohacsi as follows.

(a) in claims 22 and 28, "a light tube body having a first end portion, a second end portion, and a **spiral portion** extended between the first and second end portions" is included to claim the structure of the light tube, wherein Mohacsi merely teaches an envelope 12 has an elongated shape as shown in Fig. 1.

(b) in claims 22 and 28, "each of the first and second electrodes has an **enlarged surface area**" is claimed, wherein Mohacsi merely teaches two electrodes 16, 18 are placed within the envelope 12 at opposite ends without any mention of any enlarged surface area. In addition Mohacsi merely teaches the electrode has an outer layer 28 having an emission-assisting coating and an intermediate layer 26 made of material capable of releasing the active gas. It is apparent that the electrode of Mohacsi is different from the electrode of the instant invention.

(c) in claims 22 and 28, "an activated gas absorber, made of zirconium-vanadium-iron alloy, formed at each of the first and second electrodes at the first and second surface areas thereof" is claimed, wherein Mohacsi merely suggests Zirconium-based getters are most commonly used without provide any of such suggestion or description in its disclosure. The applicant respectfully submits that the conventional getters, in page 2, lines 23-25, are barium alloy or ally containing Zirconium and aluminum (Zirconium-based). The activated gas absorber of the instant invention is specifically zirconium-vanadium-iron alloy having an activation temperature of 390 degrees Celsius such that the zirconium-vanadium-iron alloy is adapted to minimize the manufacturing cost of the cold electrode fluorescent lamp and prolong the life span thereof.

In addition, a mere recitation of Zirconium-based in Mohacsi does not suggest any chemical and physical properties of zirconium-vanadium-iron. Besides, Mohacsi does not verbally suggest any material having Zirconium-based to be used. It is apparent that Mohacsi fails to teach the same recitation and limitation in the claims 22

and 28 of the instant invention of using zirconium-vanadium-iron as the activated gas absorber.

(d) in claims 22 and 28, “the zirconium-vanadium-iron gas absorber is **integrally coated** on the surface area of the respective electrode to form an **integral electrode**” is claimed, wherein Mohacsi merely teaches the core of the mass 22 comprises the getters 25 and is disposed inside the cathode. It is apparent that Mohacsi fails to teach the same recitation and limitation in the claims 22 and 28 of the instant invention of forming the integral electrode with the zirconium-vanadium-iron gas absorber by integrally coating the zirconium-vanadium-iron on the surface area of the electrode.

(e) Mohacsi does not teach “each of the first and second electrodes comprises a single layer plate defining the surface area thereon that the activated gas absorber is coated on the single layer plate” as claimed in claims 23, 31 and 32 in addition to what is claimed in claims 22 and 28 as a whole.

(f) Mohacsi does not teach “each of the first and second electrodes comprises a two-layer plate defining the surface area thereon that the activated gas absorber is coated on the two-layer plate” as claimed in claims 24, 33 and 34 in addition to what is claimed in claims 22 and 28 as a whole.

(g) Mohacsi does not teach “each of the first and second electrodes comprises a cylindrical tube defining the surface area thereon that the activated gas absorber is coated on the cylindrical tube” as claimed in claims 25, 35 and 36 in addition to what is claimed in claims 22 and 28 as a whole.

(h) Mohacsi does not teach “each of the first and second electrodes comprises a spiral member having a constant cross section along a longitudinal direction and defining the surface area thereon that the activated gas absorber is coated on the spiral member” as claimed in claims 26, 37 and 38 in addition to what is claimed in claims 22 and 28 as a whole.

(i) Mohacsi does not teach “each of the first and second electrodes comprises a spiral member having a cross section varying along a longitudinal direction and defining the surface area thereon that the activated gas absorber is coated on the

spiral member” as claimed in claims 27, 39 and 40 in addition to what is claimed in claims 22 and 28 as a whole.

(j) Mohacsi does not include any housing to receive the spiral light tube body therein to form the cold electrode fluorescent lamp as claimed in claim 28. In fact, Mohacsi does not teach the idea of forming a cold electrode fluorescent lamp as a shape of regular light bulb.

(k) in claim 28, “an igniter is disposed in said base and is electrically connected to the first and second terminals” is claimed to operate the first and second electrodes, wherein Mohacsi never mention any igniter incorporating with the electrode.

(l) Mohacsi does not teach “an air passage communicating an interior of the housing with an exterior thereof for balancing an interior pressure of the housing and for dissipating heat from the light tube” as claimed in claims 29 in addition to what is claimed in claim 28 as a whole.

(m) Mohacsi does not teach “the housing is sealedly mounted on the base for maintaining heat from the light tube” as claimed in claims 30 in addition to what is claimed in claim 28 as a whole.

6. Whether the claims 22 to 40 as amended of the instant invention are obvious depends on whether the above differences (a) to (m) between the instant invention and Mohacsi are obvious in view of Boffito and Nigg at the time of the invention was made.

7. Furthermore, the applicant respectfully submits that when applying 35 USC 103, the following tenets of patent law must be adhered to:

- (a) The claimed invention must be considered as a whole;
- (b) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (c) The references must be viewed without the benefit of hindsight vision afforded by the claimed invention; and
- (d) Reasonable expectation of success is the standard with which obviousness is determined.

Also, "The mere fact that a reference could be modified to produce the patented invention would not make the modification obvious unless it is suggested by the prior art." *Libbey-Owens-Ford v. BOC Group*, 4 USPQ 2d 1097, 1103 (DCNJ 1987).

8. The Examiner alleges that the electrodes having the shapes (a single layer plate, a two-layer plate, a spiral having a constant cross-section, or a spiral having a vary cross section, are well known in the art.

9. Broad conclusory statements regarding the teaching of a reference is not evidence. There has to be actual evidence that is clear and particular. *Bard v. M3*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). "Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact." See *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1476, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993). "The Examiner's conclusory statement that the specification does not teach the best mode of using the invention is unaccompanied by evidence or reasoning and is entirely inadequate to support the rejection." *In re Sichert*, 566 F.2d 1154, 1164, 196 USPQ 209, 217 (CCPA 1977).

10. The rejections in the Office Action are broad conclusory statements: The invention is obvious because they are considered "**obvious design choices**"; "unless unobvious or unexpected results are obtained from the changes", the invention is not patentable. Such broad conclusory statements are not sufficient to support the rejection.

11. The applicant respectfully submits that the electrode, in the form of a single layer plate, a two-layer plate, a spiral having a constant cross-section, or a spiral having a vary cross section, provides an enlarged surface area that the zirconium-vanadium-iron gas absorber is integrally coated on the enlarged surface area of the respective electrode to form an integral electrode. Also, no cited art teaches the shape of the electrode contains such feature with the zirconium-vanadium-iron gas absorber.

12. Boffito merely teaches a non-evaporable ternary gettering alloy, composed of Zr, V, and Fe, introduced into a vessel without any suggestion of how such gettering alloy be possibly equipped in an electrode. The applicant respectfully submits the zirconium-vanadium-iron gas absorber is **integrally coated** on the surface area of the respective

electrode to form an **integral electrode** but not simply introduced into the light tube body or disposed inside the cathode.

Nigg merely teaches an adaptor for fluorescent tubes compatible plug-in socket receiving different shaped caps of the light fittings. Similarly, neither Mohacsi nor Nigg suggests a light tube containing the above distinctive features (a) to (m) as claimed in the instant invention as well as any combination or possibility of integrally coating a zirconium-vanadium-iron gas absorber on the enlarged surface area of the respective electrode to form an integral electrode.

13. “To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited art references for combination in the manner claimed... [T]he suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness...” *In re Gorman*, 933 F.2d 982, 986, 18 USPQ 2d 1885, 1888 (Fed. Cir. 1991).

14. Accordingly, the applicant believes that neither Mohacsi, Boffito nor Nigg, separately or in combination, suggest or make any mention whatsoever of the difference subject features (a) to (m) as claimed in the amended claims 22 to 40 of the instant invention.

15. Applicant believes that for all of the foregoing reasons, all of the claims are in condition for allowance and such action is respectfully requested.

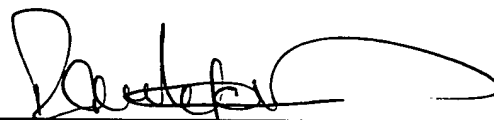
The Cited but Non-Applied References

16. The cited but not relied upon references have been studied and are greatly appreciated, but are deemed to be less relevant than the relied upon references.

17. In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of the objection are requested. Allowance of claims 22-40 at an early date is solicited.

18. Should the Examiner believe that anything further is needed in order to place the application in condition for allowance, he is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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